

# BIBEK ACHARYA

Python & Machine Learning Enthusiast

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## SUMMARY

Motivated B.Sc. Computer Science student with hands-on experience building full-stack web applications and machine learning solutions. Comfortable across the stack — from FastAPI for backend and data analysis with NumPy, pandas, and scikit-learn. Quick to master new technologies, works well in teams, and is looking for an internship to apply these skills to real-world development problems.

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## TECHNICAL SKILLS

- **Languages:** Python
- **Backend & APIs:** FastAPI, REST API design & development
- **Data & Machine Learning:** NumPy, pandas, scikit-learn, Matplotlib, Seaborn, Jupyter Notebook
- **Frontend:** HTML, CSS
- **Tools & Platforms:** MS Word, MS Excel, n8n (basic)

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## PROJECTS

**Employee Attrition Prediction API** | Python, FastAPI, scikit-learn, Pydantic | [GitHub Repo](#)

- Built a production-style REST API that predicts employee attrition, trained on the IBM HR Analytics dataset of 1,470 employee records using a scikit-learn Logistic Regression pipeline.
- Combined OneHotEncoder and StandardScaler in a ColumnTransformer and serialized the full preprocessing and model pipeline with joblib for fast, retrain-free inference.
- Identified a class-imbalance problem in the baseline model that caused it to miss over half of employees who actually left, and tuned a class-weighted model that raised recall from 46% to 56%.
- Designed Pydantic-validated request schemas and exposed predict, health-check, and root endpoints with auto-generated Swagger UI and ReDoc documentation.

**Supervised Machine Learning Practice** | Python, pandas, scikit-learn, Matplotlib, Seaborn | [GitHub Repo](#)

- Built and evaluated regression and classification models, including k-Nearest Neighbors, covering the full workflow from exploratory data analysis to model evaluation in Jupyter Notebook.
- Used pandas for data cleaning and preparation, and Matplotlib and Seaborn to visualize model performance and feature relationships.

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## EDUCATION

**Bachelor of Science (B.Sc.) in Computer Science and Information Technology**

Tribhuvan University, Kathmandu | 2024 – Present

**High School (10+2), Science**

National School of Sciences | Graduated August 2024 | GPA: 3.57

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## CERTIFICATES

- Introduction to Career Skills in Software Development — LinkedIn Learning (June 2024)
- SQL and Relational Databases 101 — Cognitive Class.ai, powered by IBM

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## LANGUAGES

- Nepali — First Language
- English — C1 (Proficient)